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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/689,928	10/12/2000	Arihiro Takeda	2803.64683	7460

7590 10/04/2005  
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Chicago, IL 60606

EXAMINER
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NGUYEN, DUNG T

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/689,928

Applicant(s)

TAKEDA ET AL.

Examiner

Dung Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 150,151,154-162,164-166 and 168-170 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 164-166 and 168-170 is/are allowed.
- 6) ☒ Claim(s) 150-151,154-162 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/14/2005 has been entered.
2. Applicants' amendment dated 07/14/2005 has been received and entered. By the amendment, claims 150, 151, 154-162, 164-166 and 168-170 are pending in the application.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 150-151, 158 and 162 are rejected under 35 U.S.C. 102(b) as being anticipated by Koma, US Patent No. 5,608,556.

The above claims are anticipated by Koma's figures 3-6 disclose an active matrix liquid crystal display (LCD) device comprising:

- . a first substrate (10) and a second substrate (30);
- . a liquid crystal (40) having a negative dielectric constant anisotropy;
- . a thin film transistor (TFT) forming on the first substrate;

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first domain regulating means (protrusion 22) and second domain regulating means (slit 33a) for regulating azimuths of orientations of the liquid crystal when a voltage is applied to the liquid crystal (figures 5-6), wherein each of the first/second domain regulating means provided under an alignment film (23/34) and on pixel electrodes (17/32);

the first and second domain regulating means are arranged on the substrates so that the first domain regulating means *substantially surrounds* the second domain regulating means in the display areas of the pixels (figure 6);

### ***Claim Rejections - 35 USC § 103***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 154-157 and 159-161 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koma, US Patent No. 5,608,556, in view of Hirata et al., US Patent No. 5,953,093,.

Regarding the above claims, Koma disclose the claimed invention as described above except for the protrusion and/or the slit can be interchangeably formed on the electrode as the first and second domain regulating means. Hirata et al. do disclose a domain regulating means consists of protrusions (figure 19) and/or slits (figure 22) provided on substrates. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to substitute the first/second domain regulating means by protrusions/slits, since the Examiner takes Office Notice of the interchangeable equivalents of protrusions, slits for their use in the LCD art (as evidence from Hirata et al.) and the selection of any of these known equivalents to align liquid crystal molecules would be within the level of ordinary skill in the art.

***Allowable Subject Matter***

7. Claims 164-166 and 168-170 are allowed.

8. The following is a statement of reasons for the indication of allowable subject matter:

None of prior art discloses or suggests an LCD device in which a domain regulating means is a protrusion-like structure including wherein said domain regulating means includes a first conductive layer of a material that is the same as that of a gate electrode of the TFT, a first insulating layer of a material that is the same as that of a gate insulating layer of the TFT and which covers said first conductive layer, a second conductive layer of a material that is the same as that of source/drain electrode of the TFT and which is on said first insulating layer, and a second insulating layer of a material that is the same as that of a protection insulating layer of the TFT and which covers said second conductive layer as set forth in claim 164 or the domain regulating means is a protrusion-like structure arranged within slits provided in the pixel electrodes as set forth in claim 168.

***Response to Arguments***

9. Applicant's arguments dated 07/14/2005 have been considered but are moot in view of the new ground(s) of rejection as stated above.

***Conclusion***

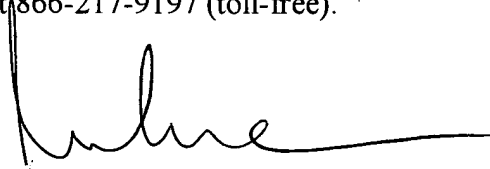
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Nguyen whose telephone number is 571-272-2297. The examiner can normally be reached on Tuesday-Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DN  
09/30/2005



**Dung Nguyen**  
**Primary Examiner**  
**Art Unit 2871**